

DOI: <https://doi.org/10.38035/dijefa.v7i1><https://creativecommons.org/licenses/by/4.0/>

Determinants of Consumer Purchase Intention in Teaching Factory-Based Business Units: An Empirical Analysis of Price Perception, Product Quality, and Promotion within Vocational Education

Ni Komang Ayu Wiwin^{1*}, Ni Made Ary Widiastini², Putu Indah Rahmawati³

¹Universitas Pendidikan Ganesha, Bali, Indonesia, komang.ayu.wiwin@student.undiksha.ac.id

²Universitas Pendidikan Ganesha, Bali, Indonesia, ary.widiastini@undiksha.ac.id

³Universitas Pendidikan Ganesha, Bali, Indonesia

*Corresponding Author: komang.ayu.wiwin@student.undiksha.ac.id¹

Abstract: In the landscape of modern vocational education, the transformation of Vocational High Schools (SMK) into Regional Public Service Agencies (BLUD) through the Teaching Factory (TEFA) mechanism necessitates the adoption of professional business management practices. This study aims to deconstruct the factors influencing student purchase intention within school-based retail units, utilizing *Smensimart* at SMKN 1 Singaraja as a case study. Employing a quantitative approach with a causal research design, this study involved 190 respondents selected via purposive sampling. Data were analyzed using multiple linear regression following rigorous validity, reliability, and classical assumption tests. The findings reveal that price perception, product quality, and promotion simultaneously exert a significant influence on purchase intention, with a coefficient of determination (R^2) of 69.7%. Partially, product quality emerged as the strongest predictor ($\beta=0.401$), followed by price perception ($\beta=0.394$) and promotion ($\beta=0.297$). These findings challenge the traditional assumption that students are exclusively price-sensitive consumers, suggesting instead that they are rational consumers who prioritize value and quality. This article contributes theoretically to the educational marketing literature and offers practical implications for school business unit managers in designing robust marketing mix strategies.

Keywords: Teaching Factory, Marketing Management, Price Perception, Product Quality, Promotion, Purchase Intention, Vocational Education.

INTRODUCTION

Vocational education in Indonesia is currently at a critical inflection point (McGrath & Yamada, 2023; Putranto et al., 2024; Suharno et al., 2020). The paradigm shift from merely producing job seekers to incubating job creators and establishing institutions as financially independent entities has positioned Vocational High Schools (SMK) in a strategic yet challenging role. The Teaching Factory (TEFA) concept was introduced as a bridge connecting

the academic world with industrial reality, where schools do not merely simulate production processes but execute them within a tangible business ecosystem (McGrath & Yamada, 2023; Riwayani et al., 2024; Wahjusaputri & Bunyamin, 2022). Within this framework, school business units such as mini-markets, workshops, or production units are no longer supplementary facilities but rather responsibility centers that must be managed using modern management principles, including robust marketing strategies (Kadek et al., 2025; Kautsar et al., 2022; Putranto et al., 2024; Widiatna et al., 2025).

However, the transition toward a professional business model within a school environment often encounters significant friction. SMKN 1 Singaraja, a leading vocational institution, operates *Smensimart* as a tangible implementation of TEFA in the Online Business and Marketing sector. Although *Smensimart* is designed to serve the school community and function as a living laboratory for students, and despite possessing a clear captive market namely the population of students and teachers present daily its business performance exhibits a concerning anomaly. Internal data records a consistent downward trend in visitor numbers over the past three years: from 299,000 visitors in 2022 to 261,000 in 2023, and further declining to 259,000 in 2024.

This decline is not merely a statistical figure; it serves as a market signal indicating a dissonance between the *value proposition* offered by *Smensimart* and the expectations of its primary consumers: the students. From a strategic marketing perspective, a decline in traffic and transactions within a theoretically stable market suggests a failure in customer retention and purchase intention acquisition strategies. This phenomenon is exacerbated by external competition from school canteens, street vendors, and e-commerce platforms that aggressively target the adolescent segment.

Consequently, the urgency to investigate the determinants of purchase intention at *Smensimart* is unavoidable. Is this decline caused by prices perceived as too high by students with budget constraints? Does the product quality partially the result of student work fail to meet market standards? Or is the promotional strategy too traditional, failing to capture the attention of the highly digitized Generation Z? These questions demand rigorous empirical investigation through the lens of marketing management and applied statistics.

Understanding the consumer behavior of students (Generation Z) is key to dissecting this issue (Catană et al., 2025). This generation is characterized by unique traits: they are highly critical and tech-savvy, yet possess low loyalty if their expectations are unmet (Hidayat et al., n.d.; Prasanna & Priyanka, n.d.). Literature suggests that purchase decisions in this segment are heavily influenced by *perceived value*, which represents the trade-off between received quality and the price paid (Huwaida et al., 2024).

Preliminary data indicates complaints regarding limited product variety and price perceptions considered less competitive than external markets. Furthermore, school promotions appear suboptimal in leveraging digital channels, which are the natural habitat of students. In the context of educational services marketing and school retail, the marketing mix specifically Price, Product, and Promotion is believed to be the primary antecedent variable shaping purchase intention (Aszzura Rasyida & Aprianingsih, 2024; Iqbal Ismail et al., 2025; Kung et al., 2021a; Mir-Bernal, 2022). However, the magnitude of each variable's contribution within the specific context of a *Teaching Factory* remains an *underexplored area*.

While literature on the influence of the marketing mix on purchase intention is abundant, the majority of studies focus on large-scale commercial retail, e-commerce, or the banking and hospitality industries. Research specifically dissecting marketing dynamics within School-Based Enterprises or Teaching Factories remains relatively scarce, particularly in high-impact journals. The research gap lies in the distinct ecological context. School business units operate in a semi-closed environment with a dual mission: profitability and education. Classical marketing theories may function differently here. For instance, will students purchase low-

quality products solely due to *peer support*? Or do they act as purely rational economic agents? This study fills that gap by testing the validity of marketing mix theory and the *Theory of Planned Behavior* (TPB) within the Indonesian vocational education ecosystem. The novelty of this research also lies in the use of recent empirical data (2025), reflecting post-pandemic consumer behavior amidst inflationary pressures affecting student purchasing power. The depth of statistical analysis, extending beyond basic hypothesis testing, provides precise managerial insights for the future development of TEFA business models.

This study aims to: 1. Empirically analyze the simultaneous influence of price perception, product quality, and promotion on purchase intention. 2. Measure the partial influence of each independent variable on the dependent variable. 3. Identify the dominant variable serving as the *key driver* of student purchase decisions. And, 4. Formulate data-driven strategic recommendations for *Smensimart* management and TEFA administrators to enhance market performance and school economic independence.

Literature Review

Purchase Intention Purchase intention is defined as the consumer's preference and willingness to purchase a product or service (Kung et al., 2021b). Conceptualize it as the psychological motivation that drives action (Bandhu et al., 2024). It is measured through indicators such as transactional interest (tendency to buy), referential interest (willingness to recommend), preferential interest (primary choice), and explorative interest (seeking information). **Price Perception** Price is the economic value exchanged for the utility of a product (Haitao, 2022; Lin et al., 2022; Panjaitan et al., 2024; Zhao et al., 2021). However, consumer behavior is driven by perception how the price is encoded subjectively (Haitao, 2022; Panjaitan et al., 2024). For students with limited disposable income, price fairness and affordability are critical determinants (Hudson & Thaler, 2023; Theocharis & Tsekouropoulos, 2025). A positive price perception occurs when the perceived value exceeds the monetary cost (Haitao, 2022). *H1: Price Perception has a positive and significant effect on Purchase Intention.*

Product Quality Product quality reflects the product's ability to satisfy stated or implied needs (Ahyani, 2023; Arifin, 2021; Impact of Product Quality on Customer Satisfaction: Evidence from Selected Consumer Durables, 2023; Management & Astuti, n.d.). In retail, this extends to merchandise assortment, product durability, and visual appeal. High product quality reduces perceived risk and builds trust, thereby increasing the likelihood of purchase. *H2: Product Quality has a positive and significant effect on Purchase Intention.* **Promotion** Promotion encompasses all activities used to communicate the product's value and persuade target customers to buy (Alexandrescu & Milandru, 2018; Bondarenko & Vyshnivska, 2023). Effective promotion whether through discounts, social media, or direct selling can alter the demand curve by increasing brand awareness and creating a sense of urgency. *H3: Promotion has a positive and significant effect on Purchase Intention.* **Simultaneous Influence** The marketing mix components function interdependently. A competitively priced product with high quality will fail if not promoted, just as a well-promoted poor product will fail to sustain sales. *H4: Price Perception, Product Quality, and Promotion simultaneously affect Purchase Intention.*

METHOD

This study employs a quantitative research approach to systematically investigate the underlying phenomena through measurable data (Gamage, 2025; Noyes et al., 2019). The inquiry is grounded in a positivistic paradigm, which views reality as stable, observable, and measurable through scientific methods. Specifically, the research design utilizes a causal framework to determine the nature of the relationships between the selected variables. The primary objective of this design is to identify and analyze distinct cause-and-effect links among

the independent and dependent factors. To achieve this validation, the study relies on rigorous statistical hypothesis testing to interpret the collected empirical data. Ultimately, this methodological structure ensures that the conclusions drawn regarding the variables' influence are statistically significant and generalizable.

The population identified for this research encompasses the entire academic community within the SMKN 1 Singaraja environment. To select the respondents, the study utilized a Non-Probability Sampling method with a specific Purposive Sampling approach. The determination of the adequate sample size was rigorously regarding multivariate analysis requirements (Fife & Gossner, 2024; Nanjundeswaraswamy & Divakar, 2021; Rojon et al., 2021). According to this methodological standard, the ideal sample size is calculated by multiplying the number of research indicators by a factor of ten. In the context of this study, the research instrument comprises exactly 19 distinct indicators used to measure the variables. Consequently, by applying this calculation, the final sample size established for this investigation consists of 190 respondents.

Data analysis was conducted using IBM SPSS Statistics version 25. The stages included:

1. Instrument Quality Test: Validity (Pearson Correlation) and Reliability (Cronbach's Alpha > 0.60).
2. Classical Assumption Tests: Normality, Multicollinearity, and Heteroscedasticity tests to ensure the Ordinary Least Squares (OLS) model is unbiased (BLUE).
3. Multiple Linear Regression: To model the relationship:

$$Y = \alpha + \beta_1 + \beta_2X_2 + \beta_3X_3 + e$$
4. Hypothesis Testing: F-test (Simultaneous), t-test (Partial), and Coefficient of Determination (R^2).

RESULTS AND DISCUSSION

Validity and reliability tests on 30 initial respondents indicated that all items were valid ($r_{Count} > r_{table}$) and reliable ($\alpha > 0.70$). Classical assumption tests confirmed that the data were normally distributed, free from multicollinearity ($VIF < 10$), and free from heteroscedasticity. The core statistical analysis yielded the following results:

Table 1. Regression Analysis Summary

Model	Unstandardized Coeff. (β)	t-value	Sig.	Result
(Constant)	4.383	3.672	0.000	Significant
Price Perception (X_1)	0.394	7.352	0.000	Significant
Product Quality (X_2)	0.401	10.907	0.000	Significant
Promotion (X_3)	0.297	7.191	0.000	Significant

Dependent Variable: Purchase Intention (Y)
F-value = 66.455; Sig. F = 0.000; $R^2 = 0.697$

Regression Equation:

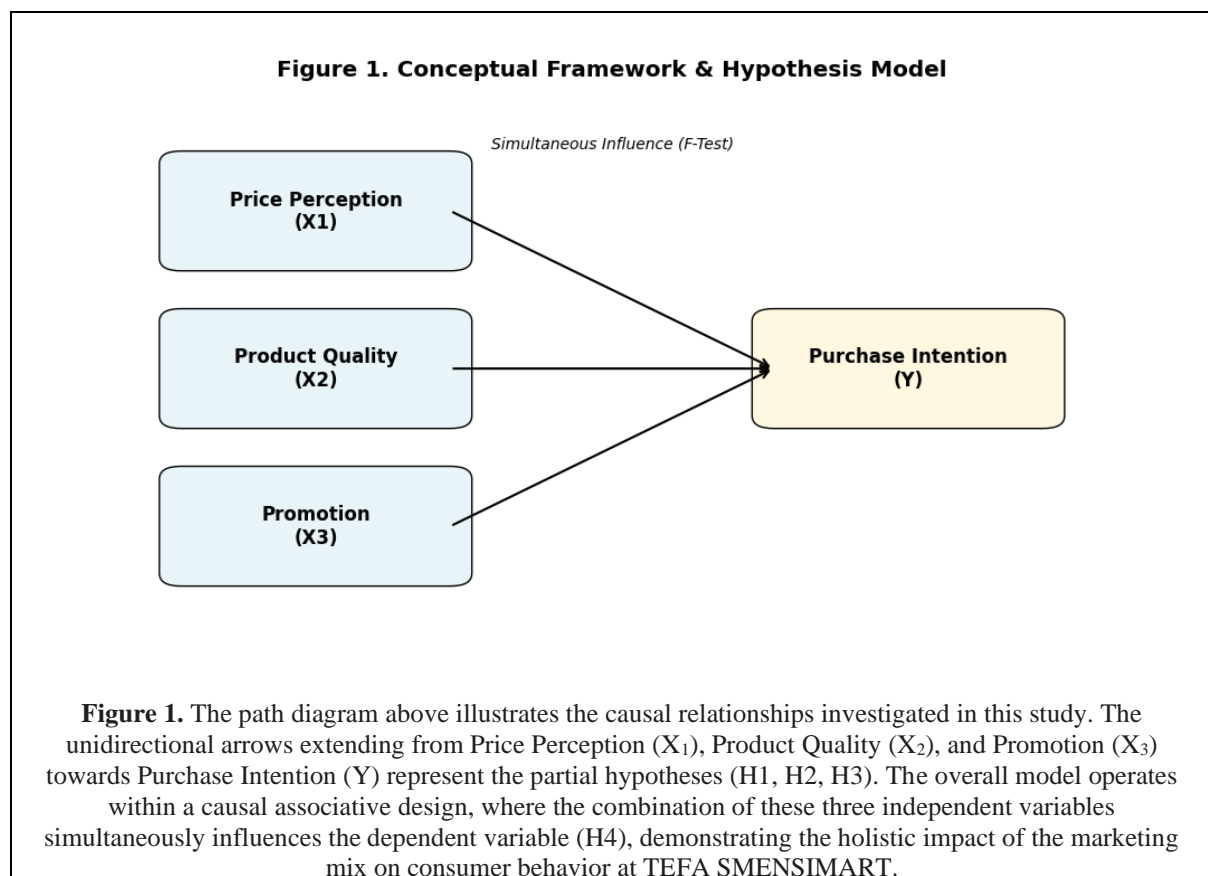
$$Y = 4.383 + 0.394X_1 + 0.401X_2 + 0.297X_3 + e$$

The statistical analysis demonstrates a robust model fit, with an R-squared value of 0.697, indicating that the independent variables account for 69.7% of the variance in purchase intention. The acceptance of the first hypothesis (H1) is supported by an F-value of 66.455 (exceeding the F-table threshold), confirming that price, quality, and promotion collectively

exert a significant simultaneous effect on purchase intention. Individually, product quality emerges as the dominant determinant ($\beta=0.401$, $t=10.907$), effectively challenging the conventional assumption that student consumers are exclusively price-driven. Nevertheless, price perception remains a critical factor ($\beta=0.397$), reaffirming that students function as rational economic agents who prioritize both affordability and perceived fairness. Conversely, while promotion significantly influences intention, it yields the lowest impact ($\beta=0.297$), suggesting that current marketing strategies may require modernization to enhance their efficacy within this demographic.

Discussion

The statistical analysis utilizing the F-test confirms that price perception, product quality, and promotion simultaneously exert a significant and positive influence on purchase intention at SMENSIMART. This finding underscores the fundamental interdependence of the marketing mix elements, indicating that no single factor operates in isolation to drive consumer behavior effectively (Fig. 1). A high-quality product requires the support of competitive pricing strategies and aggressive promotion to successfully convert latent interest into actual transactions (Alexandrescu & Milandru, 2018; Arifin, 2021; Bondarenko & Vyshnivska, 2023). If any one of these pillars is compromised, the entire value proposition collapses, resulting in a failure to capture the student market share (Alexandrescu & Milandru, 2018). Consequently, the Teaching Factory management must adopt a holistic approach by integrating these three dimensions synergistically rather than treating them as separate operational silos. Ultimately, this comprehensive strategy ensures that the educational business unit remains commercially viable while fulfilling its pedagogical objectives in a competitive retail landscape (Aszzura Rasyida & Aprianingsih, 2024).



The partial hypothesis testing reveals that price perception significantly impacts students' purchase intention, thereby validating the acceptance of the first hypothesis. This empirical result strongly corroborates Zeithaml's theory regarding the critical role of perceived value in shaping consumer decision-making processes (Chen et al., 2025; Karahan, 2024; Syamsuar & Witarsyah, 2025). Students essentially perform a rapid and rational cost-benefit analysis before committing to any financial transaction within the school environment (Aszzura Rasyida & Aprianingsih, 2024; Iqbal Ismail et al., 2025; Riwayani et al., 2024). While they generally exhibit a willingness to pay a premium price for items offering superior benefits, they remain highly critical if basic commodities are priced above prevailing market rates. This sensitivity necessitates a pricing strategy that is carefully calibrated to balance affordability with the perceived utility of the goods. Therefore, SMENSIMART must implement a competitive pricing structure that aligns with the limited purchasing power of the student demographic to maximize sales volume.

The empirical evidence highlights that product quality exerts the strongest partial influence on purchase intention among all investigated variables (Ahyani, 2023; Impact of Product Quality on Customer Satisfaction: Evidence from Selected Consumer Durables, 2023; Panjaitan et al., 2024). This crucial insight suggests that the student demographic at SMKN 1 Singaraja is predominantly driven by high standards rather than merely seeking the lowest cost option. Despite having budget constraints, these Generation Z students are constantly exposed to global product benchmarks through social media, leading them to compare SMENSIMART against modern retail chains. Consequently, they demand that the Teaching Factory products meet elevated expectations regarding taste, hygiene, and functionality comparable to professional establishments. If the products fail to strictly adhere to these quality standards, the intention to purchase declines immediately regardless of an attractive price point. Thus, maintaining rigorous quality control and product excellence is absolutely non-negotiable for the business unit to retain its internal market share effectively (Fig. 2).

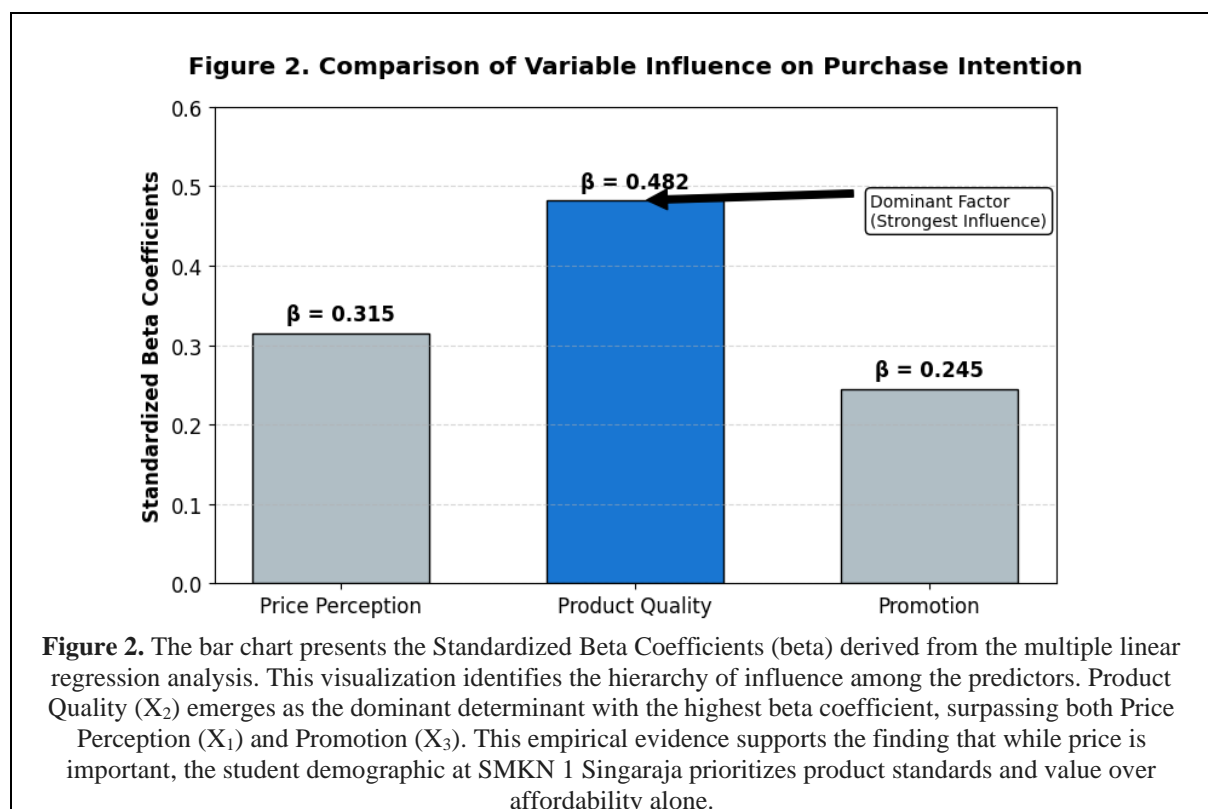


Figure 2. The bar chart presents the Standardized Beta Coefficients (beta) derived from the multiple linear regression analysis. This visualization identifies the hierarchy of influence among the predictors. Product Quality (X_2) emerges as the dominant determinant with the highest beta coefficient, surpassing both Price Perception (X_1) and Promotion (X_3). This empirical evidence supports the finding that while price is important, the student demographic at SMKN 1 Singaraja prioritizes product standards and value over affordability alone.

The study further confirms that promotion has a positive and significant partial effect on purchase intention, emphasizing the need for active market communication (Alexandrescu & Milandru, 2018; Arifin, 2021; Bondarenko & Vyshnivska, 2023). Effective promotion serves as the vital bridge that informs potential consumers about the availability and benefits of the products offered by the Teaching Factory. Without strategic promotional efforts, even high-quality and well-priced items risk remaining unsold due to a lack of consumer awareness in a crowded marketplace. Given the target audience, the utilization of digital platforms and social media campaigns is essential to capture the attention of the student body. Furthermore, promotional tactics such as limited-time discounts or bundle offers successfully create a sense of urgency that triggers immediate purchase decisions. Therefore, the management must empower marketing students to design and execute creative promotional campaigns as part of their practical learning curriculum.

CONCLUSION

This study provides robust empirical evidence resolving the research problems regarding the determinants of consumer behavior in a vocational educational business setting. Firstly, the simultaneous analysis confirms that Price Perception, Product Quality, and Promotion are not merely peripheral factors but are potent predictors that collectively elucidate nearly 70% of the variance in Student Purchase Intention. This substantial predictive power validates the applicability of the Marketing Mix framework within the unique ecosystem of a Teaching Factory, confirming that student consumers evaluate these business units with the same rationality applied to commercial retailers.

Secondly, in addressing the partial influences, the study uncovers a nuanced hierarchy of drivers that answers the question of dominance. A critical and unique insight from this research is that Product Quality supersedes Price Perception as the primary determinant of purchase intention. This finding challenges the conventional assumption that student consumers are solely price-elastic or budget-constrained. Instead, it indicates a paradigm shift where Generation Z consumers prioritize 'value' and 'retail standardization' over mere affordability. They benchmark SMENSIMART against modern retail chains (e.g., Indomaret/Alfamart); thus, any compromise in quality whether in product freshness, variety, or packaging cannot be compensated solely by lower prices.

Thirdly, while Quality is paramount, the study affirms that Price Perception and Promotion remain statistically significant and indispensable. Price acts as a hygiene factor; while it may not be the sole driver of delight, a perceived lack of fairness in pricing will actively deter purchase intention. Similarly, Promotion serves as the vital communicative bridge that informs the market of the value proposition. Therefore, the sustainability of the Teaching Factory depends on a holistic strategy: professionalizing product output to meet modern standards (Quality), adopting a student-centric value pricing strategy (Price), and actively engaging the digital-native market (Promotion).

REFERENCES

- Ahyani, A. (2023). The influence of product quality and service quality on consumer satisfaction. *Journal of Economics and Business Letters*, 3(5), 11–17. <https://doi.org/10.55942/jebll.v3i5.242>
- Alexandrescu, M.-B., & Milandru, M. (2018). Promotion as a form of Communication of the Marketing Strategy. *Land Forces Academy Review*, 23(4), 268–274. <https://doi.org/10.2478/raft-2018-0033>
- Arifin, S. (2021). The Influence of Brand Image, Product Quality and Sales Promotion on Oppo Smartphone Purchase Decisions In Sumenep Regency. In *Quest Journals Journal of Research in Business and Management* (Vol. 9). www.questjournals.org

- Aszzura Rasyida, R., & Aprianingsih, A. (2024). *The Influence of Marketing Mix and Students' Sense of Belonging Mediated by Attitude on Purchase Intention for ITB Press Merchandise*. 3(1). <https://journal.institutemandalika.com/index.php/mjbm>
- Bandhu, D., Mohan, M. M., Nittala, N. A. P., Jadhav, P., Bhadauria, A., & Saxena, K. K. (2024). Theories of motivation: A comprehensive analysis of human behavior drivers. *Acta Psychologica*, 244, 104177. <https://doi.org/https://doi.org/10.1016/j.actpsy.2024.104177>
- Bondarenko, V., & Vyshnivska, B. (2023). PROMOTIONAL MARKETING AS A METHOD OF INCREASING SALES. *Three Seas Economic Journal*, 4(2), 21–28. <https://doi.org/10.30525/2661-5150/2023-2-3>
- Catană, Ștefan A., Imbrișcă, C. I., & Veith, C. (2025). Understanding Generation Z's Purchasing Behaviour on Online Marketplaces: A TAM-Based Approach. *Journal of Theoretical and Applied Electronic Commerce Research*, 20(4). <https://doi.org/10.3390/jtaer20040260>
- Chen, Y.-C., Tsui, P.-L., Lan, B.-K., Lee, C.-S., Chiang, M.-C., Tsai, M.-Y., & Lin, Y.-H. (2025). The role of perceived value in shaping consumer intentions: a longitudinal study on green agricultural foods. *British Food Journal*, 127(4), 1343–1360. <https://doi.org/https://doi.org/10.1108/BFJ-10-2024-0987>
- Fife, S. T., & Gossner, J. D. (2024). Deductive Qualitative Analysis: Evaluating, Expanding, and Refining Theory. *International Journal of Qualitative Methods*, 23. <https://doi.org/10.1177/16094069241244856>
- Gamage, A. N. K. K. (2025). Research Design, Philosophy, and Quantitative Approaches in Scientific Research Methodology. *Scholars Journal of Engineering and Technology*, 13(02), 91–103. <https://doi.org/10.36347/sjet.2025.v13i02.004>
- Haitao, N. (2022). ANALYSIS OF PRICE PERCEPTION, PURCHASE INTEREST AND MARKETING PERFORMANCE ON PURCHASE DECISIONS. 3(4). <https://doi.org/10.31933/dijdbm.v3i4>
- Hidayat, T., Nashirah, A. F., Rini, I., & Pangestuti, D. (n.d.). *Analyzing the Consumer Behavior and Implications of Sustainable Consumption Among Generation Z*.
- Iqbal Ismail, M., Juheri, & Susanto, D. (2025). The Influence of Marketing Mix (4P) on Purchase Intention Student Entrepreneurial Products at SMKS Al-Ma'arif Cikande-Serang. In *Journal of Innovative and Creativity* (Vol. 5, Number 3).
- Hudson, P., & Thaler, T. (2023). Defining affordability and adaptation resource prioritisation. *Climate Risk Management*, 42, 100569. <https://doi.org/https://doi.org/10.1016/j.crm.2023.100569>
- Huwaida, L. A., Yusuf, A., Satria, A. N., Darmawan, M. A., Ammar, M. F., Yanuar, M. W., Hidayanto, A. N., & Yaiprasert, C. (2024). Generation Z and Indonesian Social Commerce: Unraveling key drivers of their shopping decisions. *Journal of Open Innovation: Technology, Market, and Complexity*, 10(2), 100256. <https://doi.org/https://doi.org/10.1016/j.joitmc.2024.100256>
- Impact of Product Quality on Customer Satisfaction: Evidence from Selected Consumer Durables*. (2023). www.ijrti.org
- Kadek, G., Adnyana, S., Agustini, K., & Suartama, K. (2025). Analisis Sistematis Model dan Implementasi Teaching Factory Dalam Pendidikan Vokasi Serta Dampaknya Terhadap Kesiapan Kerja Siswa SMK. *Jayapangus Press Cetta: Jurnal Ilmu Pendidikan*, 8(4). <https://jayapanguspress.penerbit.org/index.php/cetta>
- Karahan, M. O. (2024). The Role of Perceived Value and Satisfaction in Shaping Customer Citizenship Behavior: Evidence from Turkey. *International Review of Management and Marketing*, 14(6), 9–18. <https://doi.org/10.32479/irmm.16895>

- Kautsar, A., Wiyono, G., Mulia, M., Iqbal, M., & Al-Fairusy, M. (2022). Teaching Factory Model Development in Vocational High Schools. *AL-ISHLAH: Jurnal Pendidikan*, 14(4), 6347–6360. <https://doi.org/10.35445/alishlah.v14i4.2461>
- Kung, M. L., Wang, J. H., & Liang, C. (2021a). Impact of purchase preference, perceived value, and marketing mix on purchase intention and willingness to pay for pork. *Foods*, 10(10). <https://doi.org/10.3390/foods10102396>
- Kung, M. L., Wang, J. H., & Liang, C. (2021b). Impact of purchase preference, perceived value, and marketing mix on purchase intention and willingness to pay for pork. *Foods*, 10(10). <https://doi.org/10.3390/foods10102396>
- Lin, T. T., Yeh, Y. Q., & Hsu, S. Y. (2022). Analysis of the Effects of Perceived Value, Price Sensitivity, Word-of-Mouth, and Customer Satisfaction on Repurchase Intentions of Safety Shoes under the Consideration of Sustainability. *Sustainability (Switzerland)*, 14(24). <https://doi.org/10.3390/su142416546>
- Management, D., & Astuti, R. (n.d.). *THE IMPACT OF PRODUCT QUALITY AND SERVICE QUALITY ON PURCHASE DECISIONS: THE MEDIATING ROLE OF BRAND IMAGE*.
- McGrath, S., & Yamada, S. (2023). Skills for development and vocational education and training: Current and emergent trends. *International Journal of Educational Development*, 102, 102853. <https://doi.org/https://doi.org/10.1016/j.ijedudev.2023.102853>
- Mir-Bernal, P. (2022). THE ULTIMATE THEORY OF THE MARKETING MIX: A PROPOSAL FOR MARKETERS AND MANAGERS. *International Journal of Entrepreneurship*, 26(1).
- Nanjundeswaraswamy, T. S., & Divakar, S. (2021). DETERMINATION OF SAMPLE SIZE AND SAMPLING METHODS IN APPLIED RESEARCH. *Proceedings on Engineering Sciences*, 3(1), 25–32. <https://doi.org/10.24874/PES03.01.003>
- Noyes, J., Booth, A., Moore, G., Flemming, K., Tunçalp, Ö., & Shakibazadeh, E. (2019). Synthesising quantitative and qualitative evidence to inform guidelines on complex interventions: Clarifying the purposes, designs and outlining some methods. *BMJ Global Health*, 4(Supplement1). <https://doi.org/10.1136/bmjgh-2018-000893>
- Panjaitan, F. A. B. K., Juharsah, J., Muhamat, A. A., Damau, U. O., & Panjaitan, H. (2024). The Role of Price Perception in Interest in Buying Smartphones Through Optimization of Product Quality and Brand Image. *Jurnal Aplikasi Bisnis Dan Manajemen*. <https://doi.org/10.17358/jabm.10.2.447>
- Prasanna, M., & Priyanka, A. L. (n.d.). *Marketing to Gen Z: Understanding the Preferences and Behaviors of Next Generation*. Retrieved www.ijfmr.com
- Putranto, F. G. F., Natalia, C., & Pitriyani, N. K. D. (2024). Closing the Gap Between Education and Labor Market Requirement: Do Vocational Education Matter? *The Journal of Indonesia Sustainable Development Planning*, 5(3), 181–191. <https://doi.org/10.46456/jisdep.v5i3.614>
- Riwayani, R., Gani, H. A., & Syamsidah, . (2024). Development of Teaching Factory Model to Enhance Creativity of Students in the Home Economics Department of the Faculty of Engineering, UNM, Indonesia. *Asian Journal of Education and Social Studies*, 50(6), 72–92. <https://doi.org/10.9734/ajess/2024/v50i61395>
- Rojon, C., Okupe, A., & McDowall, A. (2021). Utilization and development of systematic reviews in management research: What do we know and where do we go from here? *International Journal of Management Reviews*, 23(2), 191–223. <https://doi.org/10.1111/ijmr.12245>

- Suharno, S., Pambudi, N., & Harjanto, B. (2020). Vocational Education in Indonesia: History, Development, Opportunities, and Challenges. *Children and Youth Services Review*, 115, 105092. <https://doi.org/10.1016/j.childyouth.2020.105092>
- Syamsuar, D., & Witarsyah, D. (2025). The Role of Perceived Value and Risk in Shaping Purchase Intentions in Live-Streaming Commerce: Evidence from Indonesia. *Journal of Theoretical and Applied Electronic Commerce Research*, 20(4). <https://doi.org/10.3390/jtaer20040298>
- Theocharis, D., & Tsekouropoulos, G. (2025). Sustainable Consumption and Branding for Gen Z: How Brand Dimensions Influence Consumer Behavior and Adoption of Newly Launched Technological Products. *Sustainability (Switzerland)*, 17(9). <https://doi.org/10.3390/su17094124>
- Wahjusaputri, S., & Bunyamin, B. (2022). Development of teaching factory competency-based for vocational secondary education in Central Java, Indonesia. *International Journal of Evaluation and Research in Education*, 11(1), 353–360. <https://doi.org/10.11591/ijere.v11i1.21709>
- Widiatna, A. D., Utami, P. P., & Kemal, I. (2025). Implementing and Managing the Teaching Factory Learning Model at Vocational Schools. *Jurnal Penelitian Pendidikan IPA*, 11(5), 341–351. <https://doi.org/10.29303/jppipa.v11i5.10944>
- Zhao, H., Yao, X., Liu, Z., & Yang, Q. (2021). Impact of Pricing and Product Information on Consumer Buying Behavior With Customer Satisfaction in a Mediating Role. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.720151>